

**Historic, Archive Document**

Do not assume content reflects current scientific knowledge, policies, or practices.



Reel  
7292:9  
03Wat



U. S. DEPT. OF AGRICULTURE  
NATIONAL AGRICULTURAL LIBRARY

JUL 16 1964

CURRENT SERIAL RECORDS

**WATER SUPPLY OUTLOOK**  
and  
**FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS**  
for  
**IDAHO**

UNITED STATES DEPARTMENT of AGRICULTURE...SOIL CONSERVATION SERVICE,  
and  
IDAHO STATE RECLAMATION ENGINEER

Data included in this report were obtained by the agency named above in cooperation with the Comptroller of Water Rights of British Columbia, and Federal, State and private organizations listed on the last page of this report.

||||||| AS OF |||||  
**FEB. 1, 1964**

# UNITED STATES DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE

## To Recipients of Water Supply Outlook Reports:

The climate of the cultivated and populated areas of the West is characterized by relatively dry summer months. Such precipitation as occurs falls mostly in the winter and early spring months when it is of little immediate benefit to growing crops. Most of this precipitation falls as mountain snow which stays on the ground for months, melting later to sustain streamflow during the period of greatest demand during late spring and summer. Thus, nature provides in mountain snow an imposing water storage facility.

The amount of water stored in mountain snow varies from place to place as well as from year to year and accordingly, so does the runoff of the streams. The best seasonal management of variable western water supplies results from advance estimates of the streamflow.

A snow survey consists of a series of about ten samples taken with specially designed snow sampling equipment along a permanently marked line, up to 1000 feet in length, called a snow course. The use of snow sampling equipment provides snow depth and water equivalent values for each sampling point. The average of these values is reported as the snow survey measurement for a snow course.

Snow surveys are made monthly or semi-monthly beginning in January or February and continue through the snow season until April, May or June. Currently more than 1400 western snow courses are measured each year. These measurements furnish the key data for water supply forecasts.

Streamflow forecasts are obtained by a comparison of total or maximum snow accumulation, as measured by snow water equivalent, to the subsequent spring and summer or snowmelt season runoff over a period of years. The snow water equivalent measured in selected snow courses provides most of the index to the streamflow forecast for the following season. More accurate forecasts are usually obtained when other factors such as soil moisture, base flow and spring precipitation are considered and included in the forecast procedure. Early season forecasts assume average climatic conditions through the snowmelt season.

Listed below are the Federal-State-Private Cooperative Snow Survey and Water Supply Forecast reports available for the West which contain detailed information on snow survey measurements, streamflow forecasts, reservoir storage, soil moisture and other guide data to water management and conservation decisions. Soil Conservation Service Reports may be secured from Water Supply Forecasting Unit, Soil Conservation Service, P.O. Box 2807, Portland, Oregon 97208.

### PUBLISHED BY SOIL CONSERVATION SERVICE

<u>REPORTS</u>	<u>ISSUED</u>	<u>LOCATION</u>	<u>COOPERATING WITH</u>
RIVER BASINS			
WESTERN UNITED STATES _____	MONTHLY (FEB.-MAY) _____	PORTLAND, OREGON _____	ALL COOPERATORS
BASIC DATA SUMMARY _____	OCTOBER 1 _____	PORTLAND, OREGON _____	ALL COOPERATORS
STATES			
ALASKA _____	MONTHLY (MAR.-MAY) _____	PALMER, ALASKA _____	ALASKA S.C.D.
ARIZONA _____	SEMI-MONTHLY _____ (JAN.15 - APR.1)	PHOENIX, ARIZONA _____	SALT R. VALLEY WATER USERS ASSOC. ARIZ. AGR. EXP. STATION
COLORADO AND NEW MEXICO _____	MONTHLY (FEB.-MAY) _____	FORT COLLINS, COLORADO _____	COLO. STATE UNIVERSITY COLO. STATE ENGINEER N. MEX. STATE ENGINEER
IDAHO _____	MONTHLY (JAN.-JUNE) _____	BOISE, IDAHO _____	IDAHO STATE RECLAMATION ENGINEER
MONTANA _____	MONTHLY (JAN.-JUNE) _____	BOZEMAN, MONTANA _____	MONT. AGR. EXP. STATION
NEVADA _____	MONTHLY (JAN.-MAY) _____	RENO, NEVADA _____	NEVADA DEPT. OF CONSERVATION AND NATURAL RESOURCES - DIVISION OF WATER RESOURCES
OREGON _____	MONTHLY (JAN.-JUNE) _____	PORTLAND, OREGON _____	OREG. STATE UNIVERSITY OREGON STATE ENGINEER
UTAH _____	MONTHLY (JAN.-JUNE) _____	SALT LAKE CITY, UTAH _____	UTAH STATE ENGINEER
WASHINGTON _____	MONTHLY (FEB.-JUNE) _____	SPOKANE, WASHINGTON _____	WN. STATE DEPT. OF CONSERVATION
WYOMING _____	MONTHLY (FEB.-JUNE) _____	CASPER, WYOMING _____	WYOMING STATE ENGINEER

### PUBLISHED BY OTHER AGENCIES

<u>REPORTS</u>	<u>ISSUED</u>	<u>AGENCY</u>
BRITISH COLUMBIA _____	MONTHLY (FEB.-JUNE) _____	WATER RESOURCES SERVICE, DEPT. OF LANDS, FOREST AND WATER RESOURCES, PARLIAMENT BLDG., VICTORIA, B.C., CANADA
CALIFORNIA _____	MONTHLY (FEB.-MAY) _____	CALIF. DEPT. OF WATER RESOURCES, P.O. BOX 388, SACRAMENTO, CALIF.



**WATER SUPPLY OUTLOOK**  
and  
**FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS**  
for  
**IDAHO**

*Report prepared by*

MORLAN W. NELSON      Snow Survey Supervisor

*and*

J. ALDEN WILSON      Asst. Snow Survey Supervisor

SOIL CONSERVATION SERVICE  
SNOW SURVEY SECTION  
BOX 1247, BOISE, IDAHO

*Issued by*

LEE T. MORGAN  
STATE CONSERVATIONIST  
SOIL CONSERVATION SERVICE  
BOISE, IDAHO

CARL E. TAPPAN  
STATE RECLAMATION ENGINEER  
DEPARTMENT OF RECLAMATION  
BOISE, IDAHO



# WATER SUPPLY OUTLOOK for IDAHO



## GENERAL SUMMARY

The 1964 water supply outlook is forecast to be near normal for most drainages in Idaho. The Bear River in the southeastern portion of the state is the only exception. It is forecast to flow significantly below normal. The April through September streamflow for the major rivers in the state varies from 93 percent of normal on the Spokane near Post Falls to 105 percent on the Big Lost near Mackay.

Snowfall has followed an unusual pattern for 1964. The valley and foothill areas have an extremely heavy snow cover varying from one to five times their normal amounts. The snow pack in the high mountainous elevations is near normal or slightly below. Snow cover varies from 78 percent of normal on the Kootenai River to 123 percent on the Portneuf.

Soil moisture sites throughout the state indicate relatively warm unfrozen soils beneath the snow pack. As a result of the insulating effect of early snow last fall, soil temperatures vary from 33 to 38 degrees. This is a highly desirable situation because the soil can slow down runoff by absorbing melting snow or rain. During the past two winter seasons, the soils have been frozen and runoff was very rapid on some rivers.

On those streams originating in the foothills, where there is a record-breaking snow pack, the snow poses a distinct hazard. If Chinook winds or unseasonably warm weather should occur suddenly, accompanied by rain, heavy volumes of water would come down these streams which ordinarily

flow very little or nothing. A normal spring could bring these large volumes of water down evenly over a long period of time and not create any problems. However, at this time, the snow pack at these low elevations is still continuing to build up and the possibility of sudden warm weather accompanied by rain increases as spring approaches.

At the high elevations, about two-thirds of the total year's snowfall is down by February 1. For the valley and low mountain residents of Idaho, this winter has seemed unduly hard, and it has been for these areas. However, in the high mountainous areas throughout the state, snowfall has been near normal or slightly below. In these high areas, more snow-water is needed to produce a normal snow pack for 1964.

Reservoir-stored water throughout the state is generally good although not always up to normal, such as on the Bear River and Owyhee River.



# SNOW WATER DEPTHS

As percent of 1943-57 15 year average

**FEBRUARY 1, 1964**

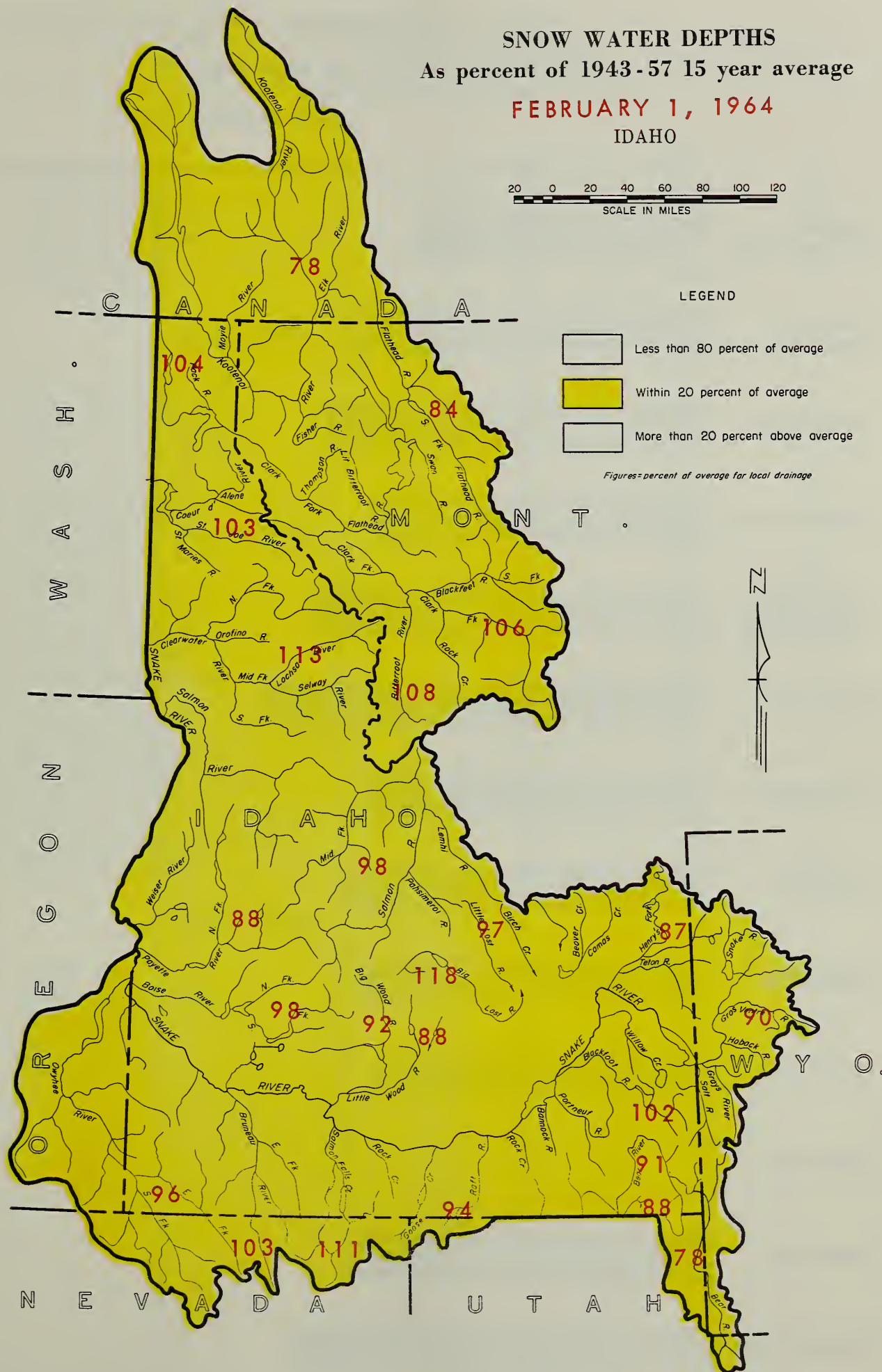
IDAHO

20 0 20 40 60 80 100 120  
SCALE IN MILES

## LEGEND

- Less than 80 percent of average
- Within 20 percent of average
- More than 20 percent above average

*Figures=percent of average for local drainage*

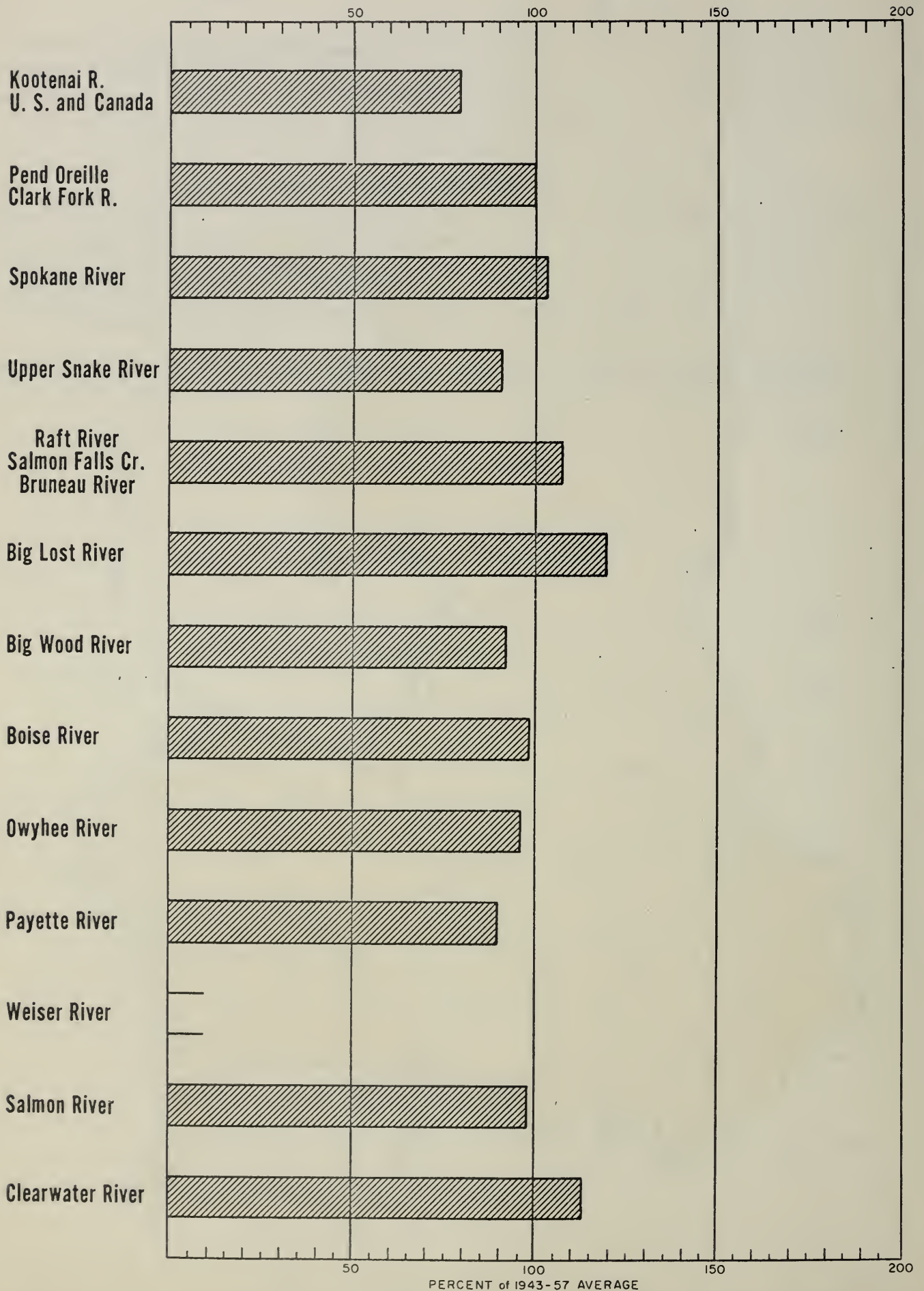


# SNOW WATER DEPTHS

BY DRAINAGE

Compared To The 1943 - 57 15 Yr. Average

*Snow Cover as of Approximately*



## COMPARISON of SNOW COVER

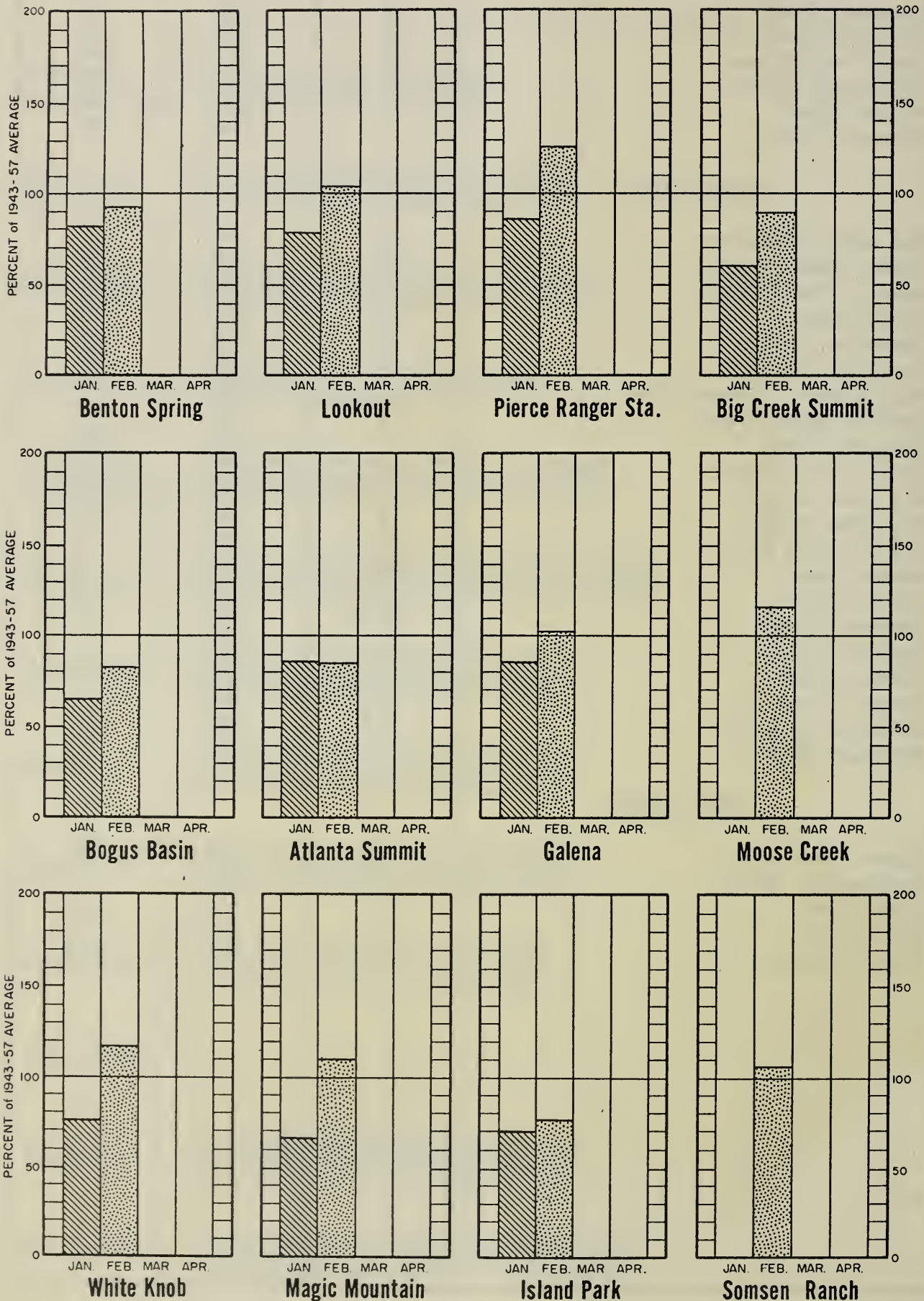
RIVER BASIN WATERSHED	NO. OF COURSES AVERAGED	THIS YEARS SNOW WATER EXPRESSED AS PERCENT OF :	
		LAST YEAR	AVERAGE <i>b</i>
<u>UPPER COLUMBIA BASIN</u>			
Kootenai River	8	105	78
Flathead River	6	150	84
Clark Fork River	11	123	106
Bitterroot River	2	187	108
Priest River	2	248	104
Spokane River	1	184	103
<u>SNAKE BASIN</u>			
Mud Lake Drainages	2	183	77
Upper Snake River	19	158	90
Henry's Fork River	3	170	87
Teton River	2-3	191	78
Blackfoot River	3	240	102
Portneuf River	3	394	123
Raft River - Goose Creek	1	240	94
Salmon Falls Creek	8	294	111
Bruneau River	4	244	103
Little Lost River	4	228	97
Big Lost River	1-9	274	118
Big Wood River	6	148	92
Little Wood River	2-3	151	88
Boise River	10	184	98
Owyhee River	11	732	96
Payette River	8-11	167	88
Weiser River	3	177	--
Salmon River	8	169	98
Lemhi River	4	193	--
Clearwater River	3-9	176	113
Palouse River	5	906	158
<u>GREAT BASIN</u>			
Upper Bear River	7	180	78
Montpelier Creek	4	270	--
Mink Creek	3	192	91
Cub River	2	230	88
Malad River	1	475	121



# SNOW WATER DEPTHS ACCUMULATION

For Selected Snow Courses  
As Compared To 1943-57 15Yr. Average

FEBRUARY 1, 1964





# PROSPECTIVE STREAMFLOW

Based on Snow Surveys made on approximately

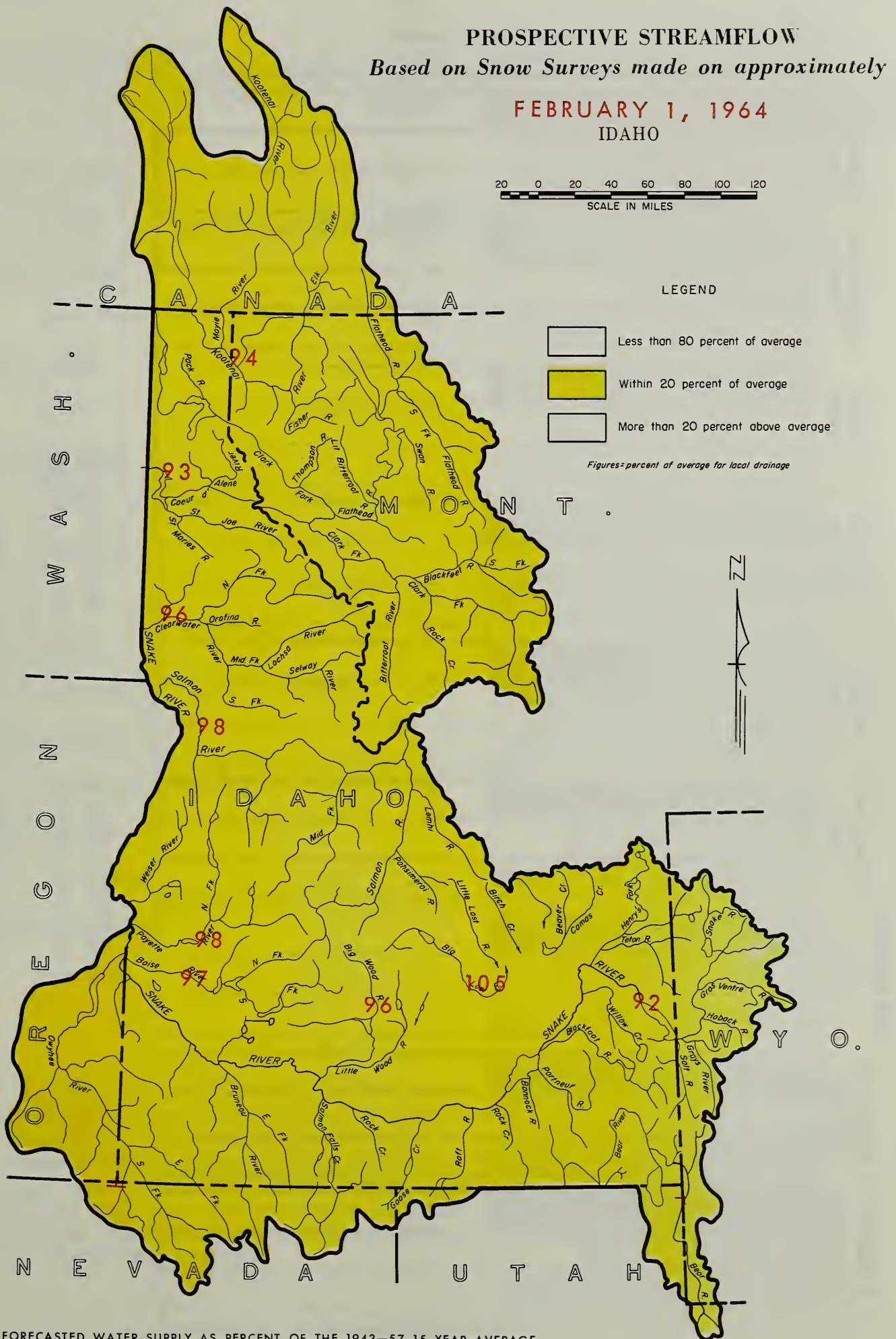
**FEBRUARY 1, 1964**  
IDAHO

20 0 20 40 60 80 100 120  
SCALE IN MILES

## LEGEND

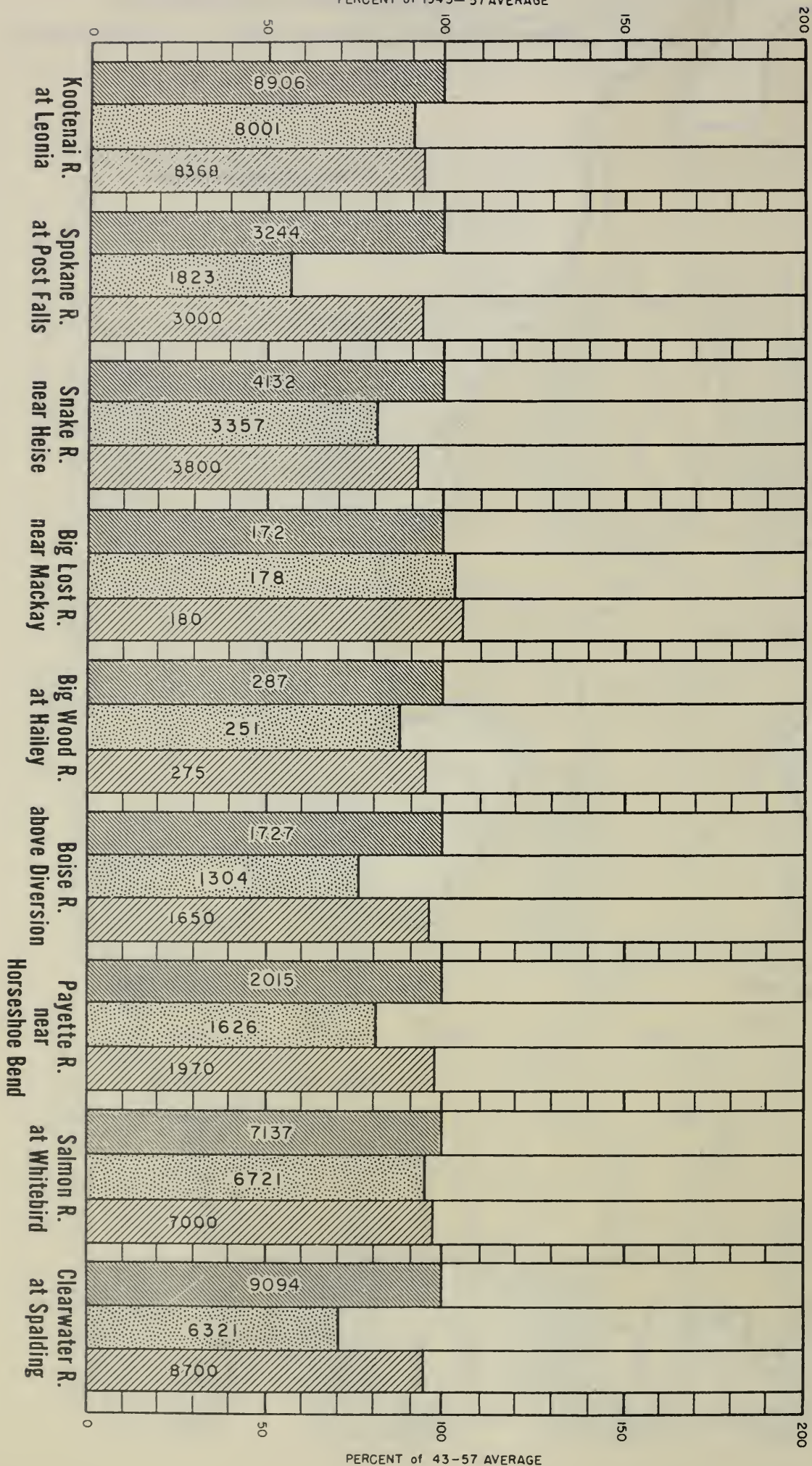
- Less than 80 percent of average
- Within 20 percent of average
- More than 20 percent above average

Figures=percent of average for local drainage



FORECASTED WATER SUPPLY AS PERCENT OF THE 1943-57 15 YEAR AVERAGE

PERCENT of 1943-57 AVERAGE



## STREAMFLOW FORECASTS (April through September period)

Based on Snow Surveys made on approximately

FEBRUARY 1, 1964

15 Yr. Average Flow 1943-57  
 Lost Years Flow  
 This Years Forecast  
 Flow in Thousands of Acre Feet



**WATER SUPPLY OUTLOOK** (expressed as "Poor", "Fair", "Average" or "Excellent")<sup>a</sup> **and** **STREAMFLOW FORECASTS (1,000 Ac. Ft.)**

STREAM and/or FORECAST POINT	OUTLOOK	FORECAST THIS YEAR	FORECAST PERIOD	1943-57 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE
------------------------------	---------	-----------------------	-----------------	--------------------	---------------------------------------

**KOOTENAI RIVER**

Leonía (at) Avg. 8368 Apr-Sep 8906 94

**SPOKANE RIVER**

Post Falls 1/ (at) Avg. 3000 Apr-Sep 3242 93

**SNAKE RIVER**

Heise 2/ (nr) Avg. 3800 Apr-Sep 4132 92

**BIG LOST RIVER**

Mackay 3/ (nr) Avg. 180 Apr-Sep 172 105

**BIG WOOD RIVER**

Hailey (at) Avg. 275 Apr-Sep 287 96

**BOISE RIVER**

Boise 4/ (nr) Avg. 1650 Apr-Sep 1704 97

**PAYETTE RIVER**

Horseshoe Bend 5/ (nr) Avg. 1970 Apr-Sep 2016 98

**SALMON RIVER**

Whitebird (at) Avg. 7000 Apr-Sep 7137 98

**CLEARWATER RIVER**

Spalding (at) Avg. 8700 Apr-Sep 9094 96

(a) Includes seasonal runoff, stored water, diversions, and other sources.

(c) Assuming normal meteorological conditions.

1/ Observed flow corrected for storage in Coeur d'Alene Lake and diversions by Spokane Valley Farms Company and Rathdrum Prairie canals. 2/ Corrected for storage in Jackson Lake and Palisades. 3/ Observed flow corrected for storage in Mackay Reservoir and diversion in Sharp Ditch. 4/ Corrected for storage in Arrowrock, Anderson Ranch and Lucky Peak. 5/ Corrected for storage in Cascade and Deadwood Reservoirs.

## RESERVOIR STORAGE (1,000 Ac. Ft.)

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1943 - 57 AVERAGE
<u>UPPER COLUMBIA BASIN</u>				
<u>Clark Fork-Pend Oreille</u>				
Hungry Horse	3428.0	2437.0	2775.0	2620.0
Flathead	1791.0	1591.0	1399.0	991.3
Pend Oreille	1561.0	612.6	750.4	535.7
Noxon	334.6	330.4	311.1	--
<u>Spokane</u>				
Coeur d'Alene	238.5	91.6	79.3	121.4
<u>SNAKE BASIN</u>				
<u>Snake</u>				
Jackson Lake	847.0	632.8	553.7	461.8
Palisades	1200.0	874.6	909.3	--
American Falls	1700.0	1102.0	1174.9	1335.9
Island Park	127.0	88.0	119.3	107.6
Grassy Lake	15.2	8.2	11.7	12.8
Brownlee	980.2	335.2	626.4	--
<u>Goose-Trapper Creeks</u>				
Oakley	74.4	10.6	14.4	15.3
<u>Salmon Falls Creek</u>				
Salmon Falls	182.6	29.3	32.8	24.7
<u>Big Lost</u>				
Mackay	44.2	37.6	30.0	32.0
<u>Big Wood</u>				
Magic	191.5	106.8	93.4	123.7
<u>Little Wood</u>				
Little Wood	33.3	18.4	14.9	--
<u>Boise</u>				
Anderson Ranch	423.2	261.2	282.1	245.2
Arrowrock	286.6	277.2	247.8	170.5
Lucky Peak	278.2	82.3	73.3	--
Lake Lowell (Deer Flat)	169.0	119.8	120.6	95.7
<u>Owyhee</u>				
Owyhee	715.0	286.0	226.1	416.6
<u>Payette</u>				
Cascade	653.2	328.4	510.9	259.7
Deadwood	161.9	85.3	84.7	80.9
<u>GREAT BASIN</u>				
<u>Bear</u>				
Bear Lake	1421.0	709.3	721.3	806.4

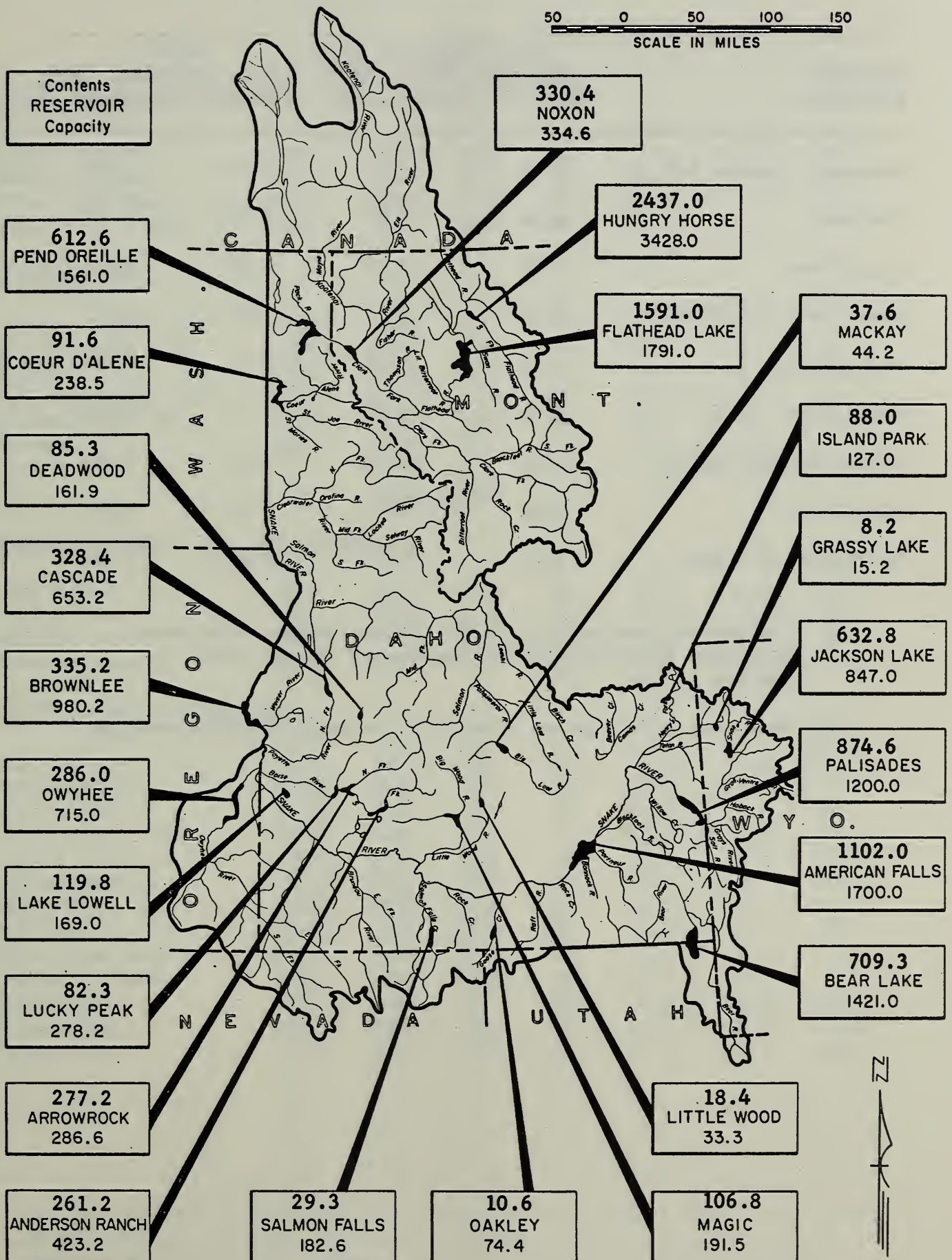


# RESERVOIR STORAGE

USABLE CONTENTS (1,000 Acre Feet)

FEBRUARY 1, 1964

50 0 50 100 150  
SCALE IN MILES



VALLEY PRECIPITATION 1/

## Division Averages and Departures

DRAINAGE DIVISIONS	Fall		Winter	
	Sep. -Oct. -Nov. 1963		Dec. 1963-Jan. 1964	
	Observed	Departure <u>2/</u>	Observed	Departure <u>2/</u>
Kootenai, Canada & U. S.	7.28	+1.19	6.06	-0.26
Flathead	4.34	-0.87	3.95	-0.44
Clark Fork	3.40	+0.50	2.09	+0.14
Pend Oreille-Spokane	8.05	-0.78	7.88	-0.32
Upper Snake	6.51	+1.68	9.01	+1.90
SNAKE RIVER PLAIN	3.00	+0.90	3.95	+0.86
Salmon-Payette-Boise	5.39	+0.68	5.29	-0.05
Clearwater	5.46	-1.24	6.31	+0.41
Southeastern Oregon	3.32	+0.95	2.40	-0.15

1/ Preliminary analysis by U. S. Weather Bureau from data furnished by Meteorological Service of Canada and U. S. Weather Bureau.

2/ Departure from 15-year (1943-57) drainage division average.



## SNOW

DRAINAGE BASIN and SNOW COURSE			CURRENT INFORMATION			PAST RECORD	
			DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	
NAME	NO.	ELEVATION				LAST YEAR	AVERAGE <sup>b</sup>

UPPER COLUMBIA BASINPRIEST RIVER

Benton Meadow	16A2	2344	1/30	32	7.6	1.0	5.5
Benton Spring	16A3	4900	1/27	54	14.2	7.8	15.4
Schweitzer Bowl	16A6	4500	1/29	91	27.4	--	--
Schweitzer Ridge	16A5	6100	1/29	108	34.0	--	--

SPOKANE RIVER

Fourth of July Smt.	16B3	3100	1/31	40	10.9	1.7	--
Granite Peak (A)	15B13	6000	1/28	93	30.1	--	--
Lookout	15B2	5250	1/30	97	26.7	14.5	25.8*
Medicine Ridge (A)	15B4	6150	1/28	109	35.3	--	--
Outlaw Creek (A)	15B12	3750	1/28	59	15.6	--	--
Sherwin	16C1	3200	2/1	55	14.1	3.0	--

SNAKE BASINMEDICINE LODGE - MUD LAKE DRAINAGES

Camp Creek	12E3	6800	1/28	25	5.0	2.9	7.0
Irving Creek	12E4	7035	1/27	15	2.5	1.5	--
Kilgore	11E12	6200	1/28	28	6.0	3.1	7.2
Webber Creek	12E5	6700	1/27	16	3.0	1.4	--

HENRY'S FORK - TETON RIVER

Big Springs	11E9	6500	1/28	49	11.4	6.2	14.5
Black Canyon	11E18	7850	1/29	70	20.8	--	--
Black Moose	11E19	8125	1/29	76	22.6	--	--
Darby Canyon (A)	10F21	8250	1/31	48	13.3	9.8	--
Island Park	11E10	6315	1/28	42	8.7	4.9	11.3
Latham Springs	11E16	7650	1/29	68	17.4	--	--
Lucky Dog	11E14	6900	1/28	50	11.4	--	--
Old Road	11E15	7250	1/29	57	14.6	--	--
Pine Creek Pass	11F2	6750	1/31	45	11.7	4.8	--
Poacher's Cabin	11E17	8000	1/29	72	20.2	--	--
State Line	11F1	6400	1/31	38	9.8	4.0	10.6
Teton Pass	10F13	8500	1/31	64	17.7	7.6	24.5*
Valley View	11E8	6500	1/28	45	11.5	7.5	10.5*

(b) 1943-57, 15 year period. # Not located directly on this drainage. \* Estimated 1943-57, 15 year Average.  
 (A) Aerial observation: Water content estimated.

## SNOW

DRAINAGE BASIN and SNOW COURSE			CURRENT INFORMATION			PAST RECORD	
			DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	
NAME	NO.	ELEVATION				LAST YEAR	AVERAGE <sup>b</sup>

BLACKFOOT - PORTNEUF RIVERS

Austin Bros. Ranch	11G3	6450	1/30	28	6.2	2.4	5.4*
China Hat	11G2	6300	1/31	21	5.0	2.2	6.0*
Dempsey Creek	12G5	6280	2/3	30	7.2	2.4	6.2*
Mink Creek	12G1	6300	1/29	43	11.0	3.2	8.2*
Pebble Creek	12G2	6550	2/3	34	10.2	1.6	8.7*
Slug Creek Divide	11G5	7225	1/30	38	10.1	5.0	--
Somsen Ranch	11G1	7000	2/3	36	8.7	3.7	8.2*

RAFT RIVER, GOOSE CREEK, SALMON FALLS CREEK, BRUNEAU RIVER

Badger Gulch	14G3	6660	1/30	33	7.7	1.2	--
Bear Creek (A)	15H1	7800	1/29	39	11.2	4.5	12.1*
Bostetter R. S. (A)	14G1	7500	1/29	51	13.9	3.7	--
Boy Scout Camp (A)	13G2	7600	1/29	31	9.2	1.8	--
Cedar Creek (A)	14G5	7000	1/29	33	9.6	1.7	8.0*
Clear Creek Meadows (A)	13H2	9050	1/29	59	17.5	8.4	--
Deadline	14G4	6900	2/1	60	17.4	6.0	15.0*
Goat Creek (A)	15H13	8800	1/29	36	9.8	2.8	10.6*
Howell Canyon	13G1	8000	1/25	57	16.1	6.7	17.2*
Hummingbird Spgs. (A)	15H15	8945	1/29	45	13.3	5.4	12.7*
Magic Mountain	14G2	6700	1/27	52	14.2	5.2	12.9*
Pole Creek R. S.	15H14	8330	1/28	45	13.3	6.8	10.7*
Red Point (A)	15H18	7940	1/29	38	11.2	1.8	--
Sheep Hollow	13G5	6200	1/31	24	6.3	0.6	--
Shoshone Basin	14G6	5740	1/31	27	6.4	0.0	4.1*
Sublett	13G3	6000	2/2	34	8.6	2.4	--
Summit Springs (A)	13G4	8500	1/29	33	8.3	T	--
Vi Pont (A)	13H3	7650	1/29	36	10.7	3.9	--
Wilson Creek (A)	15G2	7500	1/29	36	10.7	2.3	--

LITTLE LOST RIVER

Fairview Guard Sta.	13E5	5850	1/29	25	5.2	1.5	4.4*
Lost-Garfield	13E3	5700	1/29	20	3.1	1.1	3.5*
Moonshine	13E6	7250	1/29	38	8.4	4.4	8.5*
Sawmill Canyon	13E4	6000	1/29	29	6.6	3.2	7.7*

BIG LOST RIVER

Cherry Creek Pass (A)	13F13	8900	1/30	11	2.6	0.4	--
Copper Basin (A)	13F2	8000	1/30	29	8.0	1.6	--
Iron Bog	13F11	7650	2/3	38	10.4	4.2	--
Leadbelt	13F12	6800	1/30	27	6.1	2.7	--
Lost-Wood Divide (A)	14F3	8750	1/30	59	16.3	6.5	--
North Fork Meadow (A)	14F15	8150	1/30	32	8.9	3.0	--

(b) 1943-57, 15 year period. # Not located directly on this drainage. \* Estimated 1943-57, 15 year Average.  
 (A) Aerial observation: Water content estimated.



## SNOW

DRAINAGE BASIN and SNOW COURSE			CURRENT INFORMATION			PAST RECORD	
			DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	
NAME	NO.	ELEVATION				LAST YEAR	AVERAGE <sup>b</sup>

Slickrock (A)	13F14	8640	1/30	45	12.5	4.9	--
Stickney Mill (A)	14F2	7500	1/30	21	5.4	2.5	--
White Knob	13F1	7700	1/31	28	6.6	2.2	5.6*

BIG WOOD RIVER

Dollarhide Summit (A)	14F8	8620	1/30	56	15.2	9.2	20.2*
Galena	14F1	7500	1/31	53	13.5	10.0	13.3*
Galena Summit	14F12	8795	1/31	60	16.6	11.6	15.7*
Graham Ranch	14F5	6200	1/29	41	10.4	3.7	10.1
Mount Baldy	14F9	9000	1/29	55	13.8	10.6	14.5*
Soldier Rgr. Sta.	14F11	6100	1/28	32	6.5	6.2	8.8*

Little Wood River - Fish Creek

Garfield R. S.	13F4	6554	1/28	30	6.8	5.4	7.6*
Muldoon	13F5	6300	1/28	24	5.1	--	5.9*
Porcupine (A)	14F14	8350	1/30	48	13.3	7.7	--
Swede Peak (A)	13F9	7500	1/30	43	11.0	7.5	--

BOISE RIVER

Atlanta Summit (A)	15F4	7500	1/30	75	20.3	15.6	23.7*
Bad Bear	15F2	5500	2/1	52	12.3	3.4	--
Bennett Mountain	15F7	6650	1/29	53	13.8	5.5	--
Bogus Basin Road	16F4	5360	2/2	36	11.0	T	5.2*
Camas Creeks Divide(A)	15F9	5720	1/29	41	10.7	0.0	--
Couch Summit (A)	14F10	6950	1/30	49	13.6	4.4	14.0*
Danskin (A)	15F10	5650	1/29	45	11.7	1.8	--
Jackson Peak (A)	15E9	7000	1/31	81	24.0	14.2	21.9*
Little Camas Flat (A)	15F12	4950	1/29	33	8.6	0.0	--
Long Tom (A)	15F13	4550	1/29	24	6.2	0.0	--
Moore's Creek Summit	15F1	6100	2/1	85	23.0	9.5	22.5
Prairie	15F6	5600	1/26	38	7.1	3.0	5.5*
Road Creek	15F3	6800	1/31	35	8.4	2.4	8.5*
Trinity Mountain	15F5	7400	1/31	81	24.0	18.7	29.5*
Willow Creek Cabin (A)	15F11	4710	1/29	24	6.2	0.0	--

OWYHEE RIVER

Antelope Ridge	16G6	5900	1/29	30	9.7	T	--
Battle Creek (A)	16G9	5700	1/31	21	5.7	0.2	--
Bull Basin (A)	16G10	5600	1/31	9	2.4	0.1	--
Hyde Pasture (A)	16G5	5800	1/31	29	7.8	0.2	--
Mud Flat	16G7	5500	1/29	30	7.0	1.0	--
Red Canyon (A)	16G11	6650	1/31	27	7.3	0.2	--
Seventy-six Creek	15H3	7100	2/2	27	6.8	T	8.3*

(b) 1943-57, 15 year period. # Not located directly on this drainage. \* Estimated 1943-57, 15 year Average.  
 (A) Aerial observation: Water content estimated.

## SNOW

DRAINAGE BASIN and SNOW COURSE			CURRENT INFORMATION			PAST RECORD	
			DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	
NAME	NO.	ELEVATION				LAST YEAR	AVERAGE <sup>b</sup>

Silver City	16F3	6400	1/29	45	11.8	3.5	11.0*
South Mountain	16G1	6340	1/31	37	10.2	0.4	8.5
Succor Creek (A)	16F6	6100	1/31	24	6.5	0.0	--
Triangle (A)	16G4	5150	1/31	8	2.2	0.0	--

PAYETTE RIVER

Big Creek Summit	15E2	6608	1/31	77	21.5	16.9	24.3*
Bogus Basin	16F2	6120	2/2	57	13.6	7.9	16.5*
Cozy Cove	15E8	5900	1/27	50	12.2	3.9	11.8*
Crawford R. S.	15E3	4800	1/30	32	6.6	1.0	5.3*
Deadwood Airstrip	15E10	5440	1/27	50	9.8	3.6	--
Deadwood Dam	15E7	5500	1/27	51	11.2	2.8	12.7*
Deadwood Summit	15E4	7000	1/31	96	27.4	23.1	32.7*
Greenfield Flat (A)	16E7	7370	1/30	84	23.4	23.0	--
Rock Flat Summit	16E1	5200	1/27	57	12.4	3.2	12.9*
Silver Creek Ridge	15E5	5700	1/31	56	14.0	--	--
Squaw Meadow (A)	15D2	5800	1/30	76	21.7	14.9	27.6*
Tripod Summit	16E3	5200	1/31	57	14.8	4.1	--

WEISER RIVER

Boulder Creek	16D1	5500	1/30	60	15.0	6.5	--
Mica Ridge (A)	16E6	6800	1/30	82	22.9	13.8	--
Squaw Flat (A)	16E5	6230	1/30	45	12.6	8.3	--

SALMON RIVER

Big Creek Summit	15E2	6608	1/31	77	21.5	16.9	24.3*
Borah (A)	13E8	8250	1/30	23	5.1	--	--
Chapman Creek	16D2	4215	1/29	19	4.4	1.3	2.8*
Deadwood Summit	15E4	7000	1/31	96	27.4	23.1	32.7*
Galena Summit	14F12	8795	1/31	60	16.6	11.6	15.7*
Johns Creek	16D3	3805	1/29	10	2.5	1.0	2.3*
Gibbons Pass	13D2	7100	1/29	67	16.8	10.0	16.4*
Mill Creek Summit (A)	14E1	8870	1/30	45	11.3	10.0	--
Moose Creek	13D16	6200	1/28	59	14.0	5.5	12.2*
Morgan Creek Summit	14E4	7580	1/31	41	8.5	5.2	--
Redfish Lake	14E2	6600	1/30	32	7.3	--	--
Rock Flat Summit	16E1	5200	1/27	57	12.4	3.2	12.9*
Twin Peaks (A)	14E3	10300	1/30	42	10.5	9.8	--
Vienna Mine (A)	14F4	8900	1/30	72	19.9	7.9	--
Whitebird Summit	16D5	4390	1/29	27	6.6	1.6	5.2*

(b) 1943-57, 15 year period. # Not located directly on this drainage. \* Estimated 1943-57, 15 year Average.  
 (A) Aerial observation: Water content estimated.



## SNOW

DRAINAGE BASIN and SNOW COURSE			CURRENT INFORMATION			PAST RECORD	
			DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	
NAME	NO.	ELEVATION				LAST YEAR	AVERAGE <sup>b</sup>

Lemhi River

Above Gilmore (A)	13E19	8200	1/30	27	6.0	4.4	--
Aspen-Hall Pass (A)	13E21	8110	1/30	36	8.0	--	--
Copes Camp (A)	13E17	7500	1/30	18	3.7	2.4	--
Gertson Creek (A)	13D17	8050	1/30	30	6.2	2.2	--
Hall Creek (A)	13E20	7560	1/30	17	3.8	--	--
Meadow Lake (A)	13E18	9100	1/30	48	12.0	--	--
Schwartz Lake (A)	13E16	8500	1/30	37	7.7	3.2	--

CLEARWATER RIVER

Above Greer	16C11	1240	2/1	0	0.0	1.7	--
Cayuse Airstrip	15C3	3700	1/30	41	10.1	4.2	7.8*
Crater Meadows	15C9	6100	1/31	93	30.1	--	--
Elk Butte (A)	16C15	5550	1/28	96	30.3	--	--
Fish Lake Airstrip	15C2	5000	1/30	100	27.7	19.4	26.6*
Forest	16C9	4550	1/27	26	6.5	2.5	--
Forty-nine Meadows (A)	15B3	5000	1/28	92	26.6	--	--
Goat Lake (A)	14C9	6600	1/28	87	28.2	--	--
Granite Peak (A)	15B13	6000	1/28	93	30.1	--	--
Greer Summit	16C13	3000	1/31	9	3.1	1.9	--
Hemlock Butte	15C6	5500	1/31	121	38.2	--	--
Lost Lake (A)	15B14	6000	1/28	106	34.3	--	--
McCann	16C8	4300	1/27	20	4.8	2.0	--
Midway	16C12	2200	1/31	5	1.0	1.7	--
Pierce Rgr. Sta.	15C5	3171	1/27	43	11.4	3.1	9.1*
Shanghai Summit	15C4	4600	1/31	75	21.7	--	--
Sweeney	16C10	4435	1/27	21	5.0	3.1	--

PALOUSE RIVER

Crumarine Creek	16C6	3500	1/31	39	11.5	0.9	5.6*
East Twin	16C3	4000	1/31	49	15.7	1.2	9.2*
Howard Creek	16C5	3500	1/31	36	8.7	0.5	4.0*
Moscow Mountain	16C2	4800	1/31	59	16.1	3.2	12.8*
West Twin	16C4	4200	1/31	39	10.5	1.1	8.0*

GREAT BASINBEAR RIVER

Emigrant Summit	11G6	7350	1/30	48	13.5	5.4	--
Emigration Canyon	11G7	6500	1/30	26	6.6	3.3	--

(b) 1943-57, 15 year period. # Not located directly on this drainage. \* Estimated 1943-57, 15 year Average.  
 (A) Aerial observation: Water content estimated.

## SNOW

DRAINAGE BASIN and SNOW COURSE			CURRENT INFORMATION			PAST RECORD	
			DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	
NAME	NO.	ELEVATION				LAST YEAR	AVERAGE <sup>b</sup>

Montpelier Creek

Giveout	11G16	6840	1/31	33	7.8	2.7	--
Little Beaver	11G20	6970	1/31	40	10.5	3.5	--
Montpelier Creek	11G18	6570	1/31	23	4.5	2.6	--
Whiskey Flat	11G21	6985	1/31	25	6.1	1.9	--

Mink Creek

Christensen Ranch	11G11	5600	1/28	26	5.9	2.6	6.4*
Dry Basin (A)	11G14	7900	2/2	57	16.0	--	--
Horseshoe Basin (A)	11G15	8000	2/2	50	14.0	--	--
Liberty Spring (A)	11G13	8600	2/2	69	19.4	--	--
Strawberry Mink Divide	11G10	6800	1/28	46	12.0	7.1	13.6*
Strawberry Creek	11G9	5800	1/28	33	7.3	3.4	7.7*

Cub River

Cub River R. S.	11G12	5400	1/27	33	6.6	3.2	5.9*
Willow Flat	11G4	6100	1/27	45	10.4	4.2	13.5*

MALAD RIVER

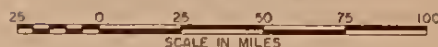
Dry Creek Flat	12G4	6350	2/3	23	5.7	1.2	4.7*
----------------	------	------	-----	----	-----	-----	------

(b) 1943-57, 15 year period. # Not located directly on this drainage. \* Estimated 1943-57, 15 year Average.  
 (A) Aerial observation: Water content estimated.

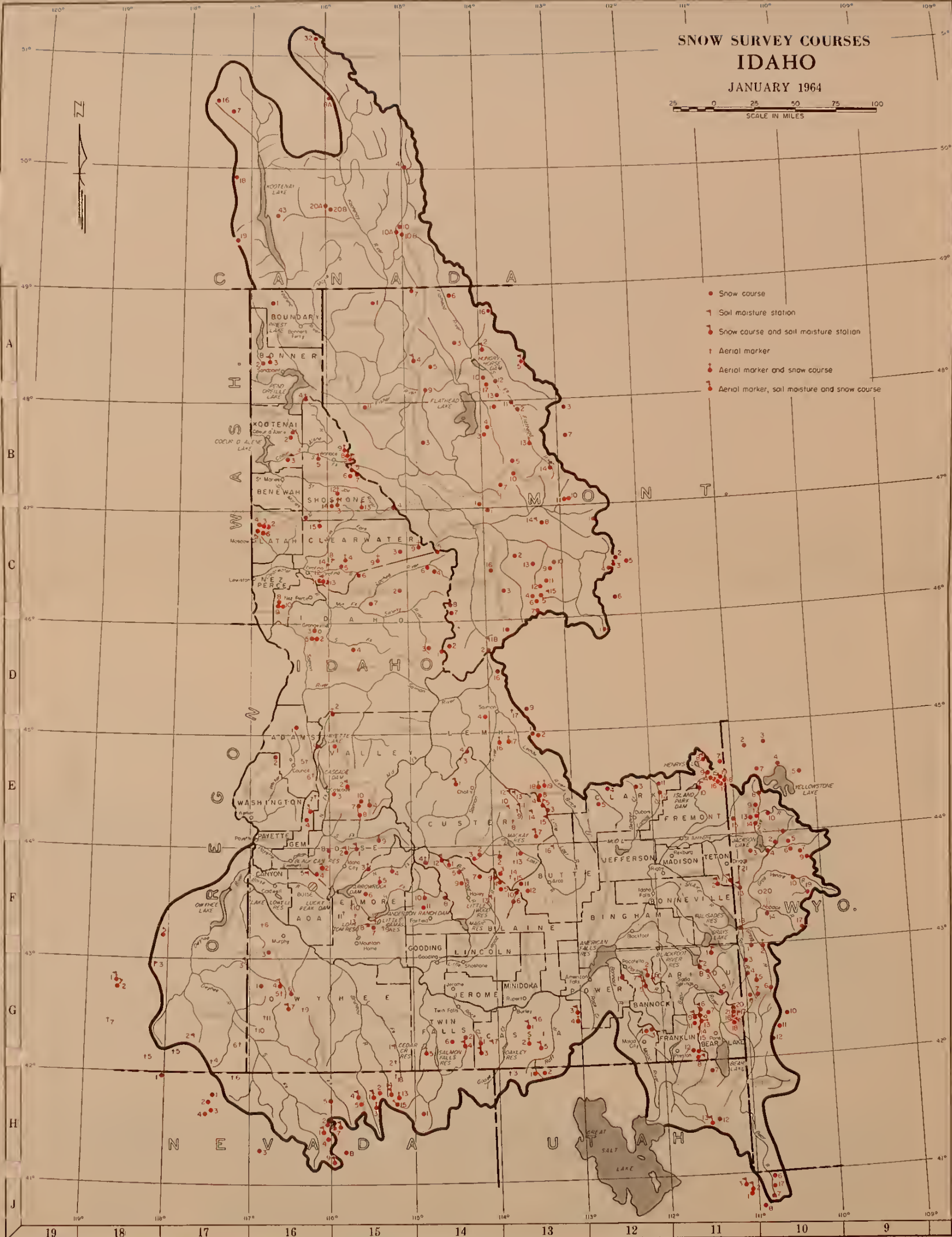


# SNOW SURVEY COURSES IDAHO

JANUARY 1964



- Snow course
- † Soil moisture station
- † Snow course and soil moisture station
- † Aerial marker
- † Aerial marker and snow course
- † Aerial marker, soil moisture and snow course



# Index to IDAHO SNOW COURSES

KOOTENAI RIVER													
NO.	STATE	NAME	SEC.	TWP.	RGE.	ELEV.	NO.	STATE	NAME	SEC.	TWP.	RGE.	ELEV.
			LAT.	AND	LONG.					LAT.	AND	LONG.	
15911	M	Barre Creek	36	26N	31W	5500	1002A	WY	Blind Bull	6	34N	115W	8750
1442M	M	Brush Creek	13	30N	26W	5000	10714	WY	Brynn Flat	9	38N	115W	6250
16	BC	Ferguson	50°42'		117°07'	5900	1133	WY	Canyon	44°44'		110°30'	7750
10	BC	Fernie	49°33'		117°17'	6000	1007	WY	CCC Camp	25	29N	118W	7500
7	BC	Gerrard	49°37'		116°21'	5100	1005A	WY	Cottonwood Lake	25	31N	118W	7600
43	BC	Gray Creek	49°12'		115°00'	3800	1012	WY	Chatter Creek	25	31N	110°33'	7600
208	BC	Kimberley	49°12'		116°00'	4100	1014A	WY	Deadman Ranch	32	34N	116W	6534
32	BC	Marble Canyon	49°27'		115°00'	6100	1014	WY	East Rim Divide	32	37N	111W	7950
108	BC	Morrissey Ridge	49°25'		117°12'	3050	1016	WY	Four Mile Meadows	12	45N	112W	7770
19	BC	Melton	49°30'		115°00'	4100	1018	WY	Glade Creek	33	48N	116W	7200
104	BC	New Fernie	49°20'		115°00'	4100	1018	WY	Grays Boundary	36	37N	118W	5800
1581	M	Red Mountain	49°20'	36N	26W	5450	1018	WY	Grays Boundary	36	40N	115W	8750
18	BC	Sandwich	50°40'		117°12'	3500	1018	WY	Grays Boundary	36	40N	115W	8750
8A	BC	Sinclair Pass	50°40'		117°12'	3500	1018	WY	Grays Boundary	36	40N	115W	8750
1641	I	Smith Creek	24	64N	7W	5100	1018	WY	Grays Boundary	36	40N	115W	8750
204	BC	Sullivan Mine	49°25'		117°00'	5100	1018	WY	Grays Boundary	36	40N	115W	8750
41	BC	Upper Elk River	49°11'		116°00'	4200	1018	WY	Grays Boundary	36	40N	115W	8750
147	M	Wesley Divide	49°11'	37N	24W	5450	1018	WY	Grays Boundary	36	40N	115W	8750
BIG WOOD RIVER													
1478A	I	Blair Lake Summit	3	38N	15E	8640	1478A	I	Blair Lake Summit	3	38N	15E	8640
1478B	I	Blair Lake Summit	3	38N	15E	8640	1478B	I	Blair Lake Summit	3	38N	15E	8640
1478C	I	Blair Lake Summit	3	38N	15E	8640	1478C	I	Blair Lake Summit	3	38N	15E	8640
1478D	I	Blair Lake Summit	3	38N	15E	8640	1478D	I	Blair Lake Summit	3	38N	15E	8640
1478E	I	Blair Lake Summit	3	38N	15E	8640	1478E	I	Blair Lake Summit	3	38N	15E	8640
1478F	I	Blair Lake Summit	3	38N	15E	8640	1478F	I	Blair Lake Summit	3	38N	15E	8640
1478G	I	Blair Lake Summit	3	38N	15E	8640	1478G	I	Blair Lake Summit	3	38N	15E	8640
1478H	I	Blair Lake Summit	3	38N	15E	8640	1478H	I	Blair Lake Summit	3	38N	15E	8640
1478I	I	Blair Lake Summit	3	38N	15E	8640	1478I	I	Blair Lake Summit	3	38N	15E	8640
1478J	I	Blair Lake Summit	3	38N	15E	8640	1478J	I	Blair Lake Summit	3	38N	15E	8640
1478K	I	Blair Lake Summit	3	38N	15E	8640	1478K	I	Blair Lake Summit	3	38N	15E	8640
1478L	I	Blair Lake Summit	3	38N	15E	8640	1478L	I	Blair Lake Summit	3	38N	15E	8640
1478M	I	Blair Lake Summit	3	38N	15E	8640	1478M	I	Blair Lake Summit	3	38N	15E	8640
1478N	I	Blair Lake Summit	3	38N	15E	8640	1478N	I	Blair Lake Summit	3	38N	15E	8640
1478O	I	Blair Lake Summit	3	38N	15E	8640	1478O	I	Blair Lake Summit	3	38N	15E	8640
1478P	I	Blair Lake Summit	3	38N	15E	8640	1478P	I	Blair Lake Summit	3	38N	15E	8640
1478Q	I	Blair Lake Summit	3	38N	15E	8640	1478Q	I	Blair Lake Summit	3	38N	15E	8640
1478R	I	Blair Lake Summit	3	38N	15E	8640	1478R	I	Blair Lake Summit	3	38N	15E	8640
1478S	I	Blair Lake Summit	3	38N	15E	8640	1478S	I	Blair Lake Summit	3	38N	15E	8640
1478T	I	Blair Lake Summit	3	38N	15E	8640	1478T	I	Blair Lake Summit	3	38N	15E	8640
1478U	I	Blair Lake Summit	3	38N	15E	8640	1478U	I	Blair Lake Summit	3	38N	15E	8640
1478V	I	Blair Lake Summit	3	38N	15E	8640	1478V	I	Blair Lake Summit	3	38N	15E	8640
1478W	I	Blair Lake Summit	3	38N	15E	8640	1478W	I	Blair Lake Summit	3	38N	15E	8640
1478X	I	Blair Lake Summit	3	38N	15E	8640	1478X	I	Blair Lake Summit	3	38N	15E	8640
1478Y	I	Blair Lake Summit	3	38N	15E	8640	1478Y	I	Blair Lake Summit	3	38N	15E	8640
1478Z	I	Blair Lake Summit	3	38N	15E	8640	1478Z	I	Blair Lake Summit	3	38N	15E	8640
SALMON RIVER													
13010A	I	Alvord-Jimmore	13	13N	26E	6200	13010A	I	Alvord-Jimmore	13	13N	26E	6200
13011M	I	Big Flat	25	11N	23E	7000	13011M	I	Big Flat	25	11N	23E	7000
13012A	I	Brush	21	10N	23E	6250	13012A	I	Brush	21	10N	23E	6250
13013A	I	Chapman Creek	16	29N	22E	4235	13013A	I	Chapman Creek	16	29N	22E	4235
13014	I	Copas Camp	36	18N	22E	7500	13014	I	Copas Camp	36	18N	22E	7500
13015A	I	Jersey Creek	22	22N	23E	8750	13015A	I	Jersey Creek	22	22N	23E	8750
13016	M	John Creek	9	24W	7E	3875	13016	M	John Creek	9	24W	7E	3875
13017	M	John Creek	9	24W	7E	3875	13017	M	John Creek	9	24W	7E	3875
13018	M	John Creek	9	24W	7E	3875	13018	M	John Creek	9	24W	7E	3875
13019	M	John Creek	9	24W	7E	3875	13019	M	John Creek	9	24W	7E	3875
13020	M	John Creek	9	24W	7E	3875	13020	M	John Creek	9	24W	7E	3875
13021	M	John Creek	9	24W	7E	3875	13021	M	John Creek	9	24W	7E	3875
13022	M	John Creek	9	24W	7E	3875	13022	M	John Creek	9	24W	7E	3875
13023	M	John Creek	9	24W	7E	3875	13023	M	John Creek	9	24W	7E	3875
13024	M	John Creek	9	24W	7E	3875	13024	M	John Creek	9	24W	7E	3875
13025	M	John Creek	9	24W	7E	3875	13025	M	John Creek	9	24W	7E	3875
13026	M	John Creek	9	24W	7E	3875	13026	M	John Creek	9	24W	7E	3875
13027	M	John Creek	9	24W	7E	3875	13027	M	John Creek	9	24W	7E	3875
13028	M	John Creek	9	24W	7E	3875	13028	M	John Creek	9	24W	7E	3875
13029	M	John Creek	9	24W	7E	3875	13029	M	John Creek	9	24W	7E	3875
13030	M	John Creek	9	24W	7E	3875	13030	M	John Creek	9	24W	7E	3875
13031	M	John Creek	9	24W	7E	3875	13031	M	John Creek	9	24W	7E	3875
13032	M	John Creek	9	24W	7E	3875	13032	M	John Creek	9	24W	7E	3875
13033	M	John Creek	9	24W	7E	3875	13033	M	John Creek	9	24W	7E	3875
13034	M	John Creek	9	24W	7E	3875	13034	M	John Creek	9	24W	7E	3875
13035	M	John Creek	9	24W	7E	3875	13035	M	John Creek	9	24W	7E	3875
13036	M	John Creek	9	24W	7E	3875	13036	M	John Creek	9	24W	7E	3875
13037	M	John Creek	9	24W	7E	3875	13037	M	John Creek	9	24W	7E	3875
13038	M	John Creek	9	24W	7E	3875	13038	M	John Creek	9	24W	7E	3875
13039	M	John Creek	9	24W	7E	3875	13039	M	John Creek	9	24W	7E	3875
13040	M	John Creek	9	24W	7E	3875	13040	M	John Creek	9	24W	7E	3875
13041	M	John Creek	9	24W	7E	3875	13041	M	John Creek	9	24W	7E	3875
13042	M	John Creek	9	24W	7E	3875	13042	M	John Creek	9	24W	7E	3875
13043	M	John Creek	9	24W	7E	3875	13043	M					



# Agencies Assisting with Snow Surveys, etc.

## GOVERNMENT AGENCIES

### Canada:

Department of Lands, Forests, and  
Water Resources, British Columbia  
Department of Resources and Development,  
Water Resources Division

### States:

Idaho State Reclamation Engineer  
State of Idaho Department of Fish and Game  
University of Idaho  
Idaho State University  
Montana Agricultural Experiment Station  
Montana State Water Conservation Board  
Nevada Cooperative Snow Surveys  
Oregon Agricultural Experiment Station  
Oregon State Engineer and Corps of  
State Watermasters  
Utah Cooperative Snow Surveys  
Wyoming Cooperative Snow Surveys

### Federal:

U. S. Army Engineers  
  
U. S. Department of Agriculture  
Forest Service  
Agricultural Research Service  
  
U. S. Department of Commerce  
Weather Bureau  
  
U. S. Department of the Interior  
Bonneville Power Administration  
Bureau of Reclamation  
Fish and Wildlife Service  
Geological Survey  
Indian Service  
National Park Service  
Bureau of Land Management

## PUBLIC UTILITIES

The Montana Power Company  
Washington Water Power Company  
Idaho Power Company  
Utah Power and Light Company

## ORGANIZED PUBLIC AGENCIES

Big Lost River Irrigation District  
Boise Project Board of Control  
Little Wood River Irrigation District  
Jordan Valley Irrigation District  
Salmon Falls Creek Irrigation Company  
Twin Falls Soil Conservation District  
Twin Lakes Irrigation Company  
Big Wood Irrigation Company  
Owyhee Project - North & South Board of Control

## PRIVATE CORPORATIONS

Amalgamated Sugar Company

*Other organizations and individuals furnish valuable information for  
snow survey reports. Their cooperation is gratefully acknowledged.*

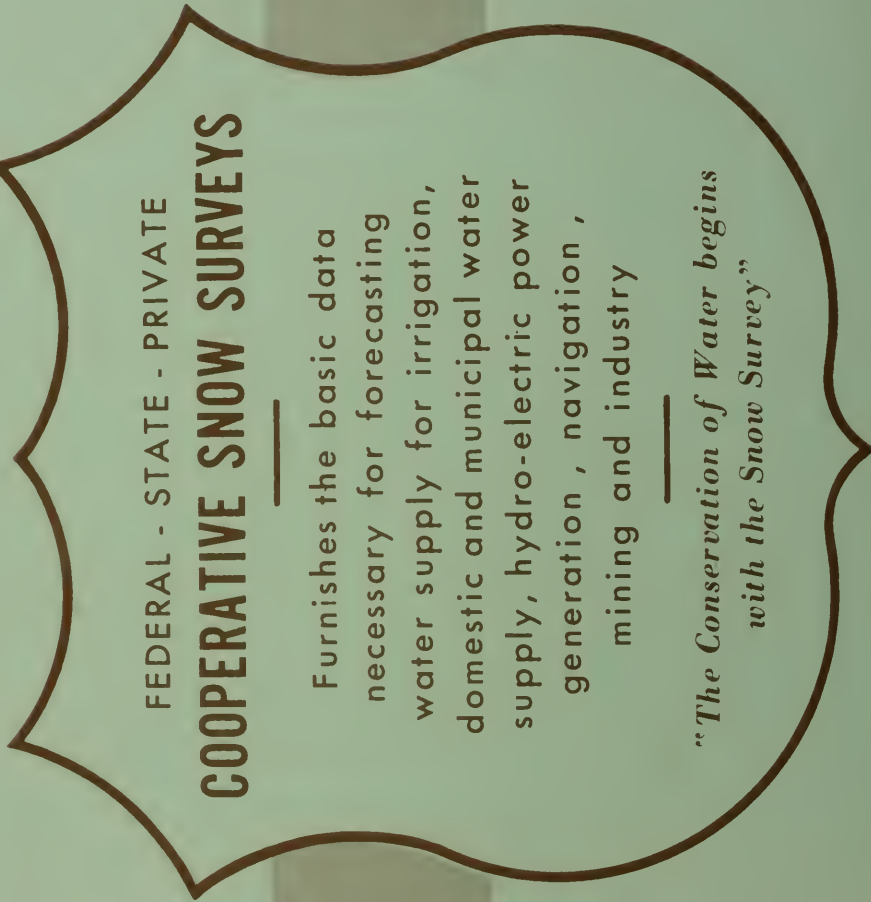


UNITED STATES DEPARTMENT OF AGRICULTURE  
SOIL CONSERVATION SERVICE  
P. O. Box 1247  
BOISE, IDAHO

POSTAGE AND FEES PAID  
U. S. DEPARTMENT OF AGRICULTURE

OFFICIAL BUSINESS

**FIRST CLASS MAIL**



FEDERAL - STATE - PRIVATE  
**COOPERATIVE SNOW SURVEYS**

Furnishes the basic data  
necessary for forecasting  
water supply for irrigation,  
domestic and municipal water  
supply, hydro-electric power  
generation, navigation,  
mining and industry

*"The Conservation of Water begins  
with the Snow Survey"*

Library, Current Serial Record  
U.S. Department of Agriculture  
Washington 25, D.C.